

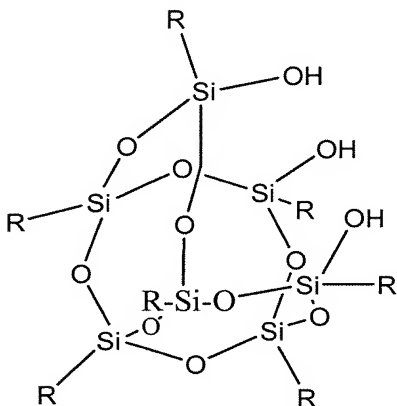
AMENDMENTS TO THE CLAIMS

Please cancel claims 1-11, and add new claims 12-35, as follows:

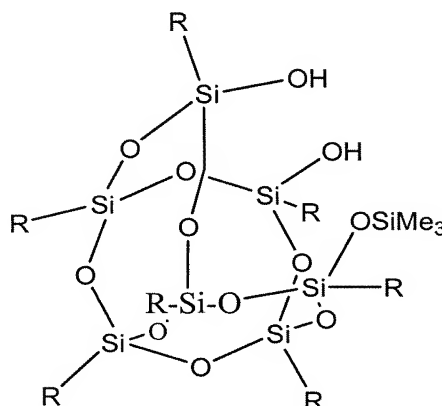
Claims 1-11 (Cancelled).

Claim 12 (New) A process for producing a low-k dielectric film deposited on a substrate, wherein said process comprises:

coating said substrate with a solution comprising an incompletely condensed polyhedral oligomeric silsesquioxane according to structural formula (1) or (2):



1



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to produce said low-k dielectric film deposited on said substrate,

wherein each R is independently selected from the group consisting of a hydrogen atom or a substituted or unsubstituted alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, cycloalkynyl, aryl, or heteroaryl group.

Claim 13 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said coating is selected from spin coating and dip coating.

Claim 14 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said process further comprises drying said low-k dielectric film deposited on said substrate.

Claim 15 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 14, wherein said drying is carried out at room temperature.

Claim 16 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said process further comprises calcining said low-k dielectric film deposited on said substrate.

Claim 17 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 16, wherein said calcining is carried out at a temperature ranging from 400°C to 500°C.

Claim 18 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said solution further comprises a co-reactant capable of hydrolytic condensation, and wherein said process further comprises reacting said incompletely condensed polyhedral oligomeric silsesquioxane with said co-reactant capable of hydrolytic condensation.

Claim 19 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 18, wherein said process further comprises prehydrolyzing said co-reactant capable of hydrolytic condensation prior to reacting with said incompletely condensed polyhedral oligomeric silsesquioxane.

Claim 20 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 19, wherein said prehydrolyzing occurs under aqueous acidic or aqueous neutral conditions.

Claim 21 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 18, wherein said co-reactant capable of hydrolytic condensation is an alkoxysilane.

Claim 22 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 21, wherein said alkoxysilane is a tetraalkoxysilane.

Claim 23 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 18, wherein the molar ratio of said incompletely condensed polyhedral oligomeric silsesquioxane to said co-reactant capable of hydrolytic condensation is from 1:100 to 100:1.

Claim 24 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 18, wherein the molar ratio of said incompletely condensed polyhedral oligomeric silsesquioxane to said co-reactant capable of hydrolytic condensation is from 1:10 to 10:1.

Claim 25 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 18, wherein the molar ratio of said incompletely condensed polyhedral oligomeric silsesquioxane to said co-reactant capable of hydrolytic condensation is from 1:2 to 2:1.

Claim 26 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said solution further comprises a solvent selected from water, an organic solvent, or a mixture thereof.

Claim 27 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 26, wherein said solvent comprises an organic solvent selected from an alcohol, a ketone, an ether, an alkane, a cycloalkane, an arene, a nitrile, an amine, a sulfide, an ester, a carboxylic acid, an amide, an unsaturated hydrocarbon, and a halogenated hydrocarbon.

Claim 28 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 26, wherein said solvent comprises 1-methoxy-2-propanol.

Claim 29 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said solution further comprises a film former comprising a saturated hydrocarbon having from 10 to 20 carbon atoms.

Claim 30 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 29, wherein said solution further comprises a film former comprising hexadecane.

Claim 31 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said substrate is selected from a semiconductor, an electrical circuit, and a conductive glass.

Claim 32 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said low-k dielectric film deposited on said substrate has a k value of less than or equal to 2.5 when measured at a frequency of 880 kHz.

Claim 33 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said low-k dielectric film deposited on said substrate has a k value of less than or equal to 2.3 when measured at a frequency of 880 kHz.

Claim 34 (New) The process for producing a low-k dielectric film deposited on a substrate according to claim 12, wherein said low-k dielectric film deposited on said substrate has a k value of less than or equal to 2.1 when measured at a frequency of 880 kHz.

Claim 35 (New) A low-k dielectric film produced by the process according to claim 12.